### **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-025658 Address: 333 Burma Road **Date Inspected:** 16-Jul-2011

City: Oakland, CA 94607

OSM Arrival Time: 1900 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** N/A **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** OBG

## **Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

Caltrans and ABF have agreed to conduct visual and magnetic particle inspections (MT) of segment 13West welds as part of a special inspection program, reference NWIT number 9751. This QA Inspector observed ABF Inspectors had completed and accepted MT inspections of welds: SEG3013W-002, 003, 004, 005, 006, 044, 045, 050, 051, 094, 095, 112, 113, 150, 152, 153, 156, 157, OBW13AA-001, 002, 003, 004; LD3050-001-013, 014, 019 and 020. This QA Inspector performed random visual and magnetic particle inspection of welds: SEG3013W-003, 007, 045, 051, 095, 113, 150, 151, 152, 153, 156; OBW13AA-001, 002, 003, 004 and these welds appear to comply with AWS D1.5 MT and visual requirements. For additional information on these inspections see this QA Inspector's TL6028 Magnetic Particle Test Report.

This QA Inspector observed ZPMC appears to have hand cut FL3 stiffener pass through slots in segment 13West FL3 plates as shown on drawing SEG3013W and SEG3013V. Below is a copy of the incident report describing this nonconformance:

Description of Incident: During Quality Assurance (QA) random in process observations of Segment 13W, this QA Inspector discovered the following issues:

- -Cut edges that do not meet the requirements of the contract documents.
- -Stiffener pass-through slots that do not meet the dimensional specifications of the approved shop drawings.

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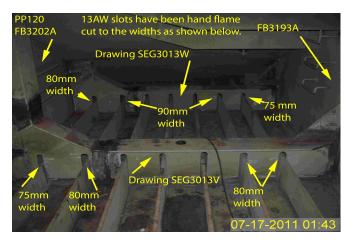
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- -ZPMC has free hand thermal cut the slots in the webs of partial height diaphragm components identified as X4441A and X4442A (drawing SEG3013W) and X4444A and X4442A (drawing SEG3013V) to facilitate the fit-up of the bottom panel to the bottom side of the FL3 floor beams.
- -The design width of the slots as shown on referenced drawing SD527 (details 527F and 527C) is 64mm.
- -The following slot locations are given from left (PP120) to right as shown in section W-W on drawing SEG3013W (X4441A / X4442A):
- -The 1st slot has a width of 80mm, the second slot is 90mm wide, the sixth slot is 90mm wide and the seventh slot is 75mm wide.
- -The following slot locations are given from left (PP120) to right as shown in section V-V on drawing SEG3013V (X4444A and X4442A):
- -The 1st slot has a width of 75mm, the second slot is 80mm wide, the sixth slot is 80mm wide and the seventh slot is 80mm wide.
- -All of the flame cut areas are "as cut" and have not been ground smooth.

See the photographs below for additional information.









### **Summary of Conversations:**

This QA Inspector informed ZPMC QA representative Mr. Zhang Wei that an indicent report was being issued to document nonconforming segment 13W FL3 stiffener pass through slots.

#### **Comments**

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer